

Appl. No. 09/497,943
Response dated May 1, 2006
Reply to Office Action of April 13, 2006

REMARKS

After entry of the present amendment, claims 29-32, 37-41, 43-48, 55, 56, 58-61, 63 and 64 are pending in the application. Claims 33, 35 and 62 have been canceled. Claims 29-31, 37, 39, 40, 45, 48, 61, 63 and 64 are presently amended. No new matter is added by way of the amendments.

Specifically, claims 29 and 64 are amended to incorporate a limitation found in originally filed claim 35. Claims 29 and 64 were also amended to remove the two sets of small roman numerals to subpart a). Claim 29 is further amended in subpart b) to remove "a," from the phrase "a labeled oligonucleotides" for purposes of clarity.

In response to the Notice of Incomplete or Non-compliant Amendment, claims 30 and 31 are amended to conform the language to the original language of claim 31.

At the examiner's request and to expedite allowance of the application, claims 30 and 31 are also amended to define the specified oligonucleotides using the phrase "consists of" in view of the use of "consists of" in base claim 29.

Claim 37 is amended to depend from claim 29 in view of the cancellation of claim 35.

Claims 37 and 39 are also amended to remove the transitional phrase "comprises" in view of the use of "consists of" in base claim 29. Additional amendments to these claims were made for purposes of clarity.

Claims 40, 45, 48 and 61 are amended to avoid the use of "comprises" and "consists essentially of." Claim 48 was also restored to its original form (i.e., the superscripts were restored as in the original claims).

Claim 63 is amended to depend from claim 29 in view of the cancellation of claim 62.

Claim 64, in addition to the amendment noted above, is amended to replace the term "extension" with "overhang," as supported in the specification at least at page 19, lines 22-24. However, it is specifically noted that the terms "3' overhang" and "3' extension" are used interchangeably in the specification.

Examiner interviews

Applicants' undersigned representative and the Examiner discussed the application by telephone on March 28, 2006. The undersigned and the Examiner, as well as Attorneys Jill Fahrlander and John Petravich and co-inventor Dr. Mark Behlke

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further discussed the application by telephone on April 10, 2006. The time and courtesies extended by the Examiner during these interviews are acknowledged with appreciation.

In the interview of March 28, 2006, various matters of claim wording and form were discussed. It is believed that the amendments made herein address the Examiner's concerns.

In the interview of April 10, 2006, the above-noted participants and the Examiner discussed the claimed invention, including its development and advantages. The Interview Summary indicates that in response to the undersigned's summary of the advantages of the invention (as provided in the specification), "[the Examiner] noted that the claims are essentially silent as to the specificity of the probes and their sensitivity." It is respectfully noted that these advantages flow from practice of the claimed methods and were mentioned during the interview to provide context for the discussion. However, Applicants respectfully assert that the claimed methods do not, indeed need not, require that any particular degree of sensitivity or specificity is obtained by performance of the methods.

The Interview Summary also indicates that the Examiner noted:

. . . that there is no minimum number of detectable moieties present in the resulting probe and as such, the claim fairly encompassed the manufacture of labeled oligonucleotides (e.g., probes or primers) where one has simply added a single nucleotide to the end of an oligonucleotide, or to both the first and second oligonucleotides. It was further noted that the claims encompass using a polymerase and labeled nucleotides in a manner such that both strands are labeled, or where a tail of virtually any length is created.

Applicant respectfully disagrees with the above characterizations of the claimed invention because they ignore limitations expressly provided by the claims. Notably, the claims are directed to a method which requires the use of a Substrate Hybridization Domain (on a Template oligonucleotide) and a Template Hybridization Domain (on a Substrate oligonucleotide) **which is heterologous to the Target Binding Domain**, wherein the Substrate Hybridization Domain and the Template Hybridization Domain are **hybridizable to each other**. Regardless of the length of the oligonucleotides labeled according to the method and whether one or two strands are labeled, none of the art of record, alone or in combination, teaches or suggests the methods claimed.

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The Examiner's Interview Summary further states that Dr. Behlke "had indicated the knowing existence of prior art that teaches the labeling of both strands of a double-stranded probe through the incorporation of labeled nucleotides via the action of a polymerase." Applicants do not concede, however, that any such prior art includes all the limitations of the present claims. Nevertheless, in order to advance prosecution, Applicants have amended claim 29 as noted above to further require that the Substrate Hybridization Domain of the first oligonucleotide cannot be extended by a 5' to 3' DNA polymerase, as originally claimed in claim 35.

The Examiner indicated his intention to update the search. Applicants respectfully note that because no previously unclaimed feature has been introduced by way of the amendments, further searching is unnecessary.

In view of the foregoing, as well as the Response filed January 10, 2005, Applicants earnestly solicit reconsideration and allowance of claims 29-32, 37-41, 43-48, 55, 56, 58-61, 63 and 64. The Examiner is invited to contact the undersigned by telephone at the Examiner's convenience should any issues remain with respect to the Application.

Respectfully submitted,

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